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ABSTRACT

High Speed Projection (HiSP) is a classroom technique that employs a standard carousel slide projector to induce conditioned oral responses by students to unfamiliar symbols. HiSP enables active teaching of Japanese, Korean, and other non-Roman languages, drastically reducing the time and effort students must devote to learning the pronunciation of new symbols. Because HiSP accelerates a student's recognition of writing symbols, it reduces both the time and effort required to learn to read. Students can learn to read before they learn to write symbols by hand, and over a 3-year course of study can learn most of the symbols commonly used in either Japanese or Korean. Initial instruction consists of introducing students to groups of seven symbols at a time, adding new groups as students become proficient in recognition and pronunciation. Students will soon be able to recognize and pronounce symbols exposed for only a fraction of a second. Once this stage is reached, vocabulary and grammar instruction are incorporated into the lessons, followed by translation. Specific techniques related to teaching Japanese and Korean script are also presented. (MDM)

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The High Speed Projection Technique for Teaching the Reading of Korean & Japanese or Other Non-Roman Writing Systems

by

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High Speed Projection (HiSP) is a classroom teaching technique that employs a standard carousel projector, slide trays, preferably 140-slide capacity, and a set of slides. The teacher can tailor the content and sequence of slides to specific requirements of a language or class. A remote control cord is desirable but not necessary. Any smooth, light-colored surface of a wall in a darkened classroom will suffice as a screen.

The HiSP technique induces a conditioned oral response to the unfamiliar symbols. With HiSP, the teacher can cause students to recall and vocalize lesson material many times in a short period. That gives the students a surprisingly firm grasp of the material.

HiSP enables active teaching of the symbols of a new writing system. HiSP makes the traditional passive approach to reading unnecessary. The teacher does not have to rely upon the motivation and diligence of each student to practice and learn the new symbols, individually. Instead, the students' repeated use of the new sounds in the classroom drills those sounds into memory.

The result of using HiSP is a drastic decrease in the time and effort a student must devote to learning the pronunciation of new reading symbols. The speed HiSP permits and the simplicity of the student's role reduce the apparent size of the task. Early use of the reading tool comes without the lonely, monotonous, repetitious, individual writing of strange symbols. The student enjoys a flush of success at a task that is usually both daunting in magnitude and because of its complexity, abundant in potential for frustration and consequent failure.

Tests show that HiSP is superior to the traditional method of teaching students to read both the hiragana syllabary of Japanese and the hangul script of Korean. HiSP is potentially adaptable to teaching the reading of many languages. Of course, languages with phonetic inconsistencies as common as they are in English will require more time to teach.

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HiSP and Reading

The HiSP technique was devised to reduce the time it takes for student to gain a functional level of reading proficiency in Japanese. HiSP capitalizes on the lightening-speed of eye and brain function. It accelerates a student's recognition of writing symbols

and, thereby, reduces both the time and effort required to learn to read.

The reason for learning to read is to become able to extract meaning from written text. Still, language programs delay the search for meaning in written text until the rudiments of manual reproduction of the writing symbols are learned. Of course, written expression in a new language needs to be learned at some point. Accurate written expression, however, cannot be expected of someone lacking a fairly extensive familiarity with the grammar, syntax and lexicon of the new language. Reading can be a major source of that familiarity. Moreover, one tends to model written expression after what one has read. So, reading is the logical antecedent of writing.

Even when the need for written expression arises, it can be done on a machine. If one can read, one need never lift a pen to correspond, write memoranda or keep records in Chinese or Japanese. Those tasks can be done with word processors and computer programs. Written expression might develop even more quickly by writing on a machine. Writing on a machine is faster than writing by hand. More writing experience can be compressed into a given length of time. Handwriting is just not an indispensable foreign language skill.

So, there is no real need to delay reading by predicating it upon the ability to write by hand. Reading and writing are separable skills. The sequence and instructional emphasis given these skills should depend upon need. The need for reading is greater than the need for writing. The need to read arises before any need to write. Reading, therefore, should be taught before writing.

It is logical to reorder the sequence from write-read to read-write and to begin teaching reading early. It is also sound educational practice. Teaching students to write symbols with which they already have a reading familiarity, abides by the principle of proceeding from the known to the unknown. If one must do so, it is easier to learn to write symbols that are recognizable and significant of meaning than unfamiliar ones.

HiSP makes it possible to teach reading from the first day of instruction without overburdening students. That early start in Japanese with both hiragana and Chinese characters, called kanji, makes it possible for students to learn 1,800 kanji in three years. That will well equip them to deal with roughly 2,000 characters commonly used in Japanese and Korean.

If we expect to equip college graduates to operate successfully in international arenas of business, government and technology, the language programs need higher objectives of proficiency. College language programs must be geared to train majors in business, government and technical fields--those who will

become managers and decision makers--to a functional level of spoken and reading proficiency. That is, to a level of proficiency that will permit them to perform their work in that language. Moreover, that needs to be done without the training becoming a full-time job of several years duration.

Results of HiSP Instruction

In classroom use, HiSP gives the teacher control of the pace and focus of activity. Students can be quickly conditioned to recognize the new writing symbols. Weaknesses can be found and shored up by extra drill. The speed with which students recognize, pronounce and define vocabulary items can be built up to the operating speed of the projector, one item per second. At that rate, a teacher can get a class to perform 280 recall and pronunciation operations in about five minutes. That would permit nearly an entire semester of kanji to be drilled in five minutes. If vocabulary slides are used, that number of slides would contain much of a semester's vocabulary.

Tests confirm what teachers have recognized in the performance of students in the classroom. Subjects taught Japanese syllabary and Korean script by the HiSP technique achieve significantly better scores on syllable recognition tests than subjects taught the same material by the traditional write-read method. In one comparison of teaching hiragana with HiSP and with the traditional technique, the experimental group (HiSP) achieved a mean score 38.34% above the mean score of the control group (traditional method). A similar comparison test of HiSP with the traditional technique of teaching the hangul script of Korean resulted in the experimental group (HiSP) achieving a mean score that was 42.58% higher than that of the control group (traditional method).

Students also appear to achieve a surprisingly firm grasp of material taught by HiSP. One subject, who stopped studying Japanese after completing three semesters of instruction with HiSP, was tested after a lapse of one year. The subject had not used the language or made any effort to maintain proficiency in it during the one-year lapse.

The test consisted of 547 different kanji contained in previously taught Japanese words and phrases. Those words and phrases were written on 506 slides for instructional use. When asked to give the proper pronunciation and the English meaning as each slide was presented, the subject correctly identified 39.85% of the kanji in a period of two hours. Another 9% of the kanji drew a partially correct response.

Mechanical components of the process consumed about twenty-five minutes. The projector required nine minutes to change slides. The examiner took five minutes removing and replacing the five slide trays used. The examiner took another eleven minutes

recording the results of each of the subject's observations. So, the subject spent ninety-five minutes viewing slides, reaching a decision and speaking the answers. That amounted to about eleven seconds per slide.

The pace was set by the subject. The subject normally paused briefly while viewing the word or phrase shown test and either gave an answer or a shake of the head to indicate "I don't know." Often times the subject also commented on the test item, explaining keys used in recall and associations of the test item with other phenomena. The subject's speed left little time to ponder a response.

The subject's performance improved dramatically on a retest, which followed a series of eighteen ten-minute review sessions. The reviews were conducted one per day, four days per week. Throughout the period of testing, review and retesting, the subject avoided any use of the language, made a conscious effort to avoid thinking about the tests and engaged in no individual review of previous instruction. On the retest, the subject correctly identified 80.25% of the kanji (439 of 547 items), more than double the first score. Another 7% of the kanji were partially identified.

Using HiSP

Reading should be the first component of a new language to be taught when HiSP is used. Where syllabaries or alphabets are used, the students should be taught to read the symbols thereof before proceeding to further instruction. The same is true for languages such as Japanese and Korean, which are written in a combination of syllabary or alphabet symbols and ideographs. Where ideographs alone are used, as in Chinese, HiSP drill should start with single ideographs, selected to present all sounds and tones of the language and proceed with those used to write the vocabulary taught.

There are two reasons for beginning instruction this way. The first is to teach the proper reading of writing symbols. The second reason is to teach the sounds of the language through use. Other researchers have suggested that the early drill of phonology may have special benefit for those who experience difficulty learning a second language.

In Teaching Japanese Syllabary. Instruction begins with a symbol projected on a screen or classroom wall. The instructor pronounces the sound represented by the symbol and asks the class to repeat the sound. A memory or mental image is suggested, such as the letter "a" and apple that are often linked in English. That furnishes students three stimuli: symbol, sound and associated image.

Students are pressed to respond promptly to the projected

image by speaking aloud the proper pronunciation of that symbol. Speed of response is steadily stressed. When initially unable to pronounce the symbol, students are urged to repeat what classmates say.

A second new symbol is introduced in the same way as the first. Then the first symbol is shown again, the students are called upon to respond and are told the sound, if no one can recall it. The first symbol is again shown for response followed by the second symbol. When most students are able to respond properly to the symbols, another new symbol is introduced and the review sequence is repeated.

The introduction of a new symbol and repetition of previously learned symbols continues until a discrete group of from five to seven symbols has been presented and learned. Introduction of a new group of symbols is initiated, following the same pattern. When most students can respond properly to symbols of the second group, the first group and the second group are reviewed, and yet another group is introduced. Throughout the introduction of basic symbols, the traditional sequence of presentation--a, b, c, d, e, for example--is retained.

At first student responses come partly from recognizing the sequence used. However, once the students can respond properly to all the symbols, the order of appearance of symbols within each presentation group should be rearranged--from a, b, c, d, e, to c, a, e, d, b, for example--to challenge the recall of students.

The instructor must continue to call for every student to respond aloud every time a symbol is shown. Also, greater and greater speed of response must be demanded. As the accuracy and speed of responses improves with drill, the exposure time of symbols can be shortened by moving to the next symbol before students complete a response.

Students will become able to recognize and pronounce symbols exposed for only a fraction of a second. To get such brief exposure, the instructor can cover the projector's lens with a hand or piece of paper. Through repeated drill, students will learn to initiate a response to a symbol even after a new symbol replaces it on the screen. At that point, students will be relying upon a mental image of the symbol that remains after the symbol's image has faded from the retina of the eye.

Students are then ready for transition from single symbols to meaningful groups of symbols, that is, words. This is a good time to begin teaching vocabulary and grammar. Short, common words should be used at first. This is also a good time to acquaint students with both handwritten and printed forms. Vocabulary should be introduced in small groups. The groups should be reviewed often, as were the groups of individual writing symbols.

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When students can promptly pronounce short words in a varied sequence of presentation, the form of response may be changed to include English meanings of the words. Increasingly longer words and phrases may be added to the drill to stretch the visual grasp of students. In a short time, even raw beginners become able to recognize common words and give their English meaning. They tend not to sound them out cautiously, as novices are inclined to do.

In Teaching Korean Script. The lay observer might expect similarities between Japanese and Korean script because of regional and historical factors. In fact, apart from their use of Chinese characters, the writing systems are dichotomous. The symbols of Japanese hiragana were derived from Chinese characters. Hiragana symbols are standardized abbreviations of cursive forms of the characters, adopted long ago to write sounds needed for conjugation and other grammatical functions in Japanese.

Hiragana symbols no longer bear any pictorial or suggested meaning. As with the letters of the English alphabet, the basic forty-six hiragana symbols must be memorized by rote and associated with a particular sound value. So the syllabary does not operate on some internal logic to signify the associated sound. One cannot look at a symbol and deduce its sound from knowledge of some systematic organization. Learning hiragana is an exercise in rote memory.

Hangul, on the other hand, has a distinct logic for the formation of its ten vowels. The simple geometric shapes of its fourteen consonants also contain some logical indicators of their sound value. Consequently, students can be expected to read far more Korean sounds than Japanese sounds in a given time. Tests of teaching both hiragana and hangul with HiSP show that one can expect students to learn to read only about thirty hiragana symbols in fifty minutes of instruction and about 140 hangul symbols in the same length of time.

The pattern of presentation is much the same as that used in teaching Japanese. It begins with a projected symbol. The sound is given and a mental image is suggested. Students are pressed to respond to each symbol promptly by pronouncing it aloud. An audible response from everyone every time is stressed. The transition from single to multiple symbols and on to short words and vocabulary items together with English meanings is followed.

The difference in time and effort between learning thirty-seven symbols in hangul and forty-six symbols in hiragana is insignificant. The logical and geometric characteristics of hangul make its symbols easier to remember and to associate with their sounds. The scheme devised for describing hangul symbols is a fictional tale of hangul's development.

The tale, briefly, is of two scholars using their breakfast

chopsticks. One clumsily dropped a chopstick and covered the embarrassment by saying that the vertically positioned chopstick represented the "ee" sound he uttered when he dropped it.

"Uh" grunted the second scholar in sarcastic agreement. No, the first scholar said, turning the chopstick to a horizontal position, "uh" is like this.

Number Two put his chopsticks on the table, crossed his arms and with mock interest said, "Oh, you eighty go on."

Grasping at straws, the besieged Number One looked frantically from Number Two's chopsticks, to his crossed arms as the challenge "Oh you ought a..." rang in his ears. He retrieved the dropped chopstick, held it across his other chopstick, forming a plus sign, and smoothly tossed Number Two's challenge back at him.

"Oh, 'oo, aw, ah." He intoned over the crossed chopsticks.

Number Two grimaced and cocked his head, mystified.

Number One used one hand to hide the bottom half of the upright chopstick from Number Two and said, "oh." Then moving his hand from hiding the bottom of the upright chopstick to hiding the top half of it, he said, "oo."

Number Two was obviously confused.

At this point the first slide with the vertical-chopstick-like <u>hangul</u> symbol labeled "ee" is shown and pronounced by the teacher. Association with the first chopstick is drawn and the class is asked to repeat. The same symbol without label is shown and class repetition is again called for. The "everyone every time" injunction is issued. The next symbol, resembling a horizontally positioned chopstick, labeled "uh" is shown and response called for. The next slide shows the same symbol without label.

The slide of a plus sign labeled "oh" at the top, "oo" at the bottom, "aw" on its left arm and "ah" on its right arm is shown. Number One's hiding of successive arms of the plus sign is recalled, and the class is told to read the sound label on the arm opposite each covered arm. The class' attention is directed to "o" sound of the up and down pointing arms and the "a" sound of the left and right-pointing arms. The unlabeled <u>hangul</u> symbols comparable to those four configurations are shown, in an oh-oo-aw-ah sequence for class response. The six labeled symbols and their unlabeled counterparts are all repeated.

Number Two understood, the story continues. Not to be left with no contribution to the project, he groped for ways to represent the remaining yoh, yoo, yaw and yah vowels. Then he recognized a pattern. He need only add a "y" sound to Number One's

last four sounds, so why not just add his chopsticks to the pair Number One was holding? He scooped up his own chopsticks and held them up against Number One's to form a tic-tac-toe pattern and triumphantly declared, "Yoh, yoo, yaw, yah!"

The tic-tac-toe figure with sound labels is shown. Students are urged pronounce each of the patterns of two arms extending from a base line that the teacher points out. Then the hangul symbols for y-sounds are shown in the yoh-yoo-yaw-yah sequence for class response.

After a review of the vowel symbols, consonants are shown, beginning with the silent initial symbol. An association is suggested between the symbol's zero-like shape and its having no initial sound value. It is combined with each vowel in a sequence that repeats the order of introduction from "ee" to "oh" and "yoh" through "yah."

The consonants "k" and "n" are positioned as two disconnected segments of a square with the k-angle labeled "Kor" and the n-angle labeled "Ner" to associate the word corners with the two angles. Each consonant is drilled with the vowels--always in its order of introduction. The class can anticipate both the image and sound of the vowel. That repetition is not only comfortable but strengthens long term memory and recall capability. Toward the end of consonant introduction and during general review, that sequence of vowels is modified, slightly at first then increasingly so until consonant-vowel syllables are shown entirely at random.

The square hangul symbol for "m" is associated with a mouth. The "t" is associated with a tongue. The reversed squared s-shaped symbol for "r" is associated with a sidewinder rattlesnake. The forked symbol for "s" is associated with a snake's tongue. The frame-like "b/p" consonant is shown as one view of an open box/package. The "ch" symbol is first shown as the lower half of a chair. Aspirated "ch" "k" and "t" symbols are described as nothing but the original symbols with an apostrophe or aspiration mark added to them. The aspirated "b/p" is described as the same empty box shown earlier with its flaps tucked inside and crushed down somewhat to be pitched into the trash. Finally, the "h" symbol is described as round lips huffing warm breath on a cold winter's morning.

The sequence, including the backtracks for review, can be run rather easily in thirty-eight minutes. The next ten or twelve minutes are spent drilling the slides in reverse order of presentation and then at random, all the while urging instantaneous responses by the class.

The learning result achieved by this teaching method is strongly influenced by the individual student's grasp of the vowel pattern. Another strong influence is the degree of concentrated

participation in the oral response to each slide. Apparently the consonant-sound associations suggested in diagrams and pictures incorporating the hangul symbol are readily assimilated.

The technique gets good learning results. It was first tested on a history class, subjects unacquainted with and not particularly interested in learning hangul. In fact, three of the subjects were never seen to open their mouths during the presentation, despite the instructor's incessant exhortation for everyone to respond aloud to every symbol.

The post-presentation test included 100 hangul syllables requiring the pronunciation for each to be written in romanization. A ten-minute time limit was set to make sure no one could answer all items and thereby facilitate examination of the average speed of response to each test item. Preliminary rehearsal of the experiment suggested that would be enough time to finish only about seventy-nine of the 100 items. Unexpectedly, one-fourth of the class finished eighty-eight or more items, suggesting some very quick recognition of hangul syllables after only fifty minutes of instruction.